

Appl. No. 09/822,906
Amd. Dated January 3, 2005
Reply to Office Action of October 7, 2004

REMARKS/ARGUMENTS

Reconsideration of the rejections set forth in the Office Action dated October 7, 2004 is respectfully requested. Claims 1-20 are currently pending. Claims 1, 2, 5, 6, 9, 10, 13, 14, and 17-20 have been rejected. Claims 3, 4, 7, 8, 11, 12, 15, and 16 have been objected to. Claims 1 and 19 have been amended for clarity.

Allowable Subject Matter

The Examiner has indicated that claims 3, 4, 7, 8, 11, 12, 15, and 16 would be allowable if rewritten in independent form to include all of the limitations of their respective base claims and any intervening claims. The Applicants have chosen not to rewrite claims 3, 4, 7, 8, 11, 12, 15, and 16 in independent form at this time, as they are of the belief that the independent claims from which claims 3, 4, 7, 8, 11, 12, 15, and 16 depend are each allowable over the cited art.

Rejections under 35 U.S.C. § 102

Claims 1, 2, 5, 6, 9, 10, 13, 14, 17, and 18 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Marchok et al. (U.S. Patent No. 6,122,246), herein and after “Marchok”.

I Independent Claims 1, 17, and their dependents

Independent claim 1 recites a method for operating a subscriber unit which includes receiving an exclusive assignment to a tone set within an OFDM burst structure, and transmitting

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an OFDM burst using tones specified by the exclusive assignment while leaving other tones in the OFDM burst such that the tones are available for use by other subscriber units. The OFDM burst is an access request burst.

As taught in the Specification, as for example on page 11 at lines 3-6, each toneset may be reserved exclusively for the use of an individual subscriber unit or service flow, and may therefore be viewed as representing a non-contention access request channel. While Marchok does appear to teach of a receiver looking for a bin containing a pilot tone, as indicated by the Examiner on page 2 of the Office Action dated October 7, 2004, Marchok does not appear to teach of a pilot tone being specified by an exclusive assignment to a toneset. Marchok teaches that a pilot tone sub-symbol is a reference clock signal that takes the form of a constant amplitude and phase sub-symbol that is transmitted in a particular frequency bin (Marchok, column 5 at lines 28-31). It is respectfully submitted that the pilot tone of Marchok does not appear to be the same as a tone or tones specified by an exclusive assignment to a toneset, and there is no suggestion in Marchok of a particular pilot tone being reserved exclusively for the use of an individual subscriber unit. Hence, a particular pilot tone as taught by Marchok may apparently be associated with more than one subscriber unit, as for example when a reference clock signal with a constant amplitude and phase sub-symbol, or a pilot tone sub-symbol, is transmitted in a plurality of bins (Marchok, column 5 at lines 34-35). As such, claim 1 is believed to be allowable for at least this reason.

Further, claim 1 requires that an OFDM burst using tones specified by an exclusive assignment is transmitted, while other tones in the OFDM burst are available for use by other subscriber units. Marchok appears to teach that a receiver recovers a single pilot tone sub-symbol (a phase sub-symbol that is transmitted in a particular frequency bin), but that any non-recovered pilot tone sub-symbols are designated as backups (Marchok, column 5 at lines 25-50). For the sake of argument, if the pilot tone sub-symbols are specified an exclusive assignment (which the Applicants do not believe to be the case), then the fact that non-recovered pilot tone sub-symbols that are specified by the exclusive assignment are designated as backups is contrary

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to the limitations of claim 1. Therefore, claim 1 is believed to be allowable over the cited art for at least this additional reason as well.

Claims 2-4 each depend directly from independent claim 1 and are, therefore, each believed to be allowable over Marchok for at least the reasons set forth above with respect to claim 1. Each of these dependent claims recite additional limitations which, when considered in light of claim 1, are believed to further distinguish the claimed invention over the art of record. By way of example, the Examiner has already indicated that claims 3 and 4 contain allowable subject matter.

Independent claim 17 recites limitations which are similar to those recited in claim 1. Therefore, claim 17 is believed to be allowable over the cited art for at least the reasons set forth above with respect to claim 1.

2. Independent Claims 5, 18 and their dependents

Independent claim 5 recites a method for operating a central access point which includes sending an exclusive assignment to a toneset within an OFDM burst structure to a selected subscriber unit, and receiving an access request OFDM burst that includes the toneset as transmitted from the selected subscriber unit.

Marchok does not appear to teach of any exclusive assignment of a toneset, as discussed above with respect to claim 1. Hence, claim 5 is believed to be allowable over the cited art for at least this reason. Further, claim 5 recites that an access request OFDM burst that includes a toneset is transmitted from a selected subscriber unit to a central access point. It is respectfully submitted that Marchok does not appear to teach of transmitting an access request OFDM burst that includes a toneset from a subscriber unit to a central access point. The Examiner has argued, on page 3 of the Office Action dated October 7, 2004, that communication between a transmitter and a receiver is inherent. While a transmitter may communicate with a receiver, the Applicants

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submit that there is no apparent teaching in Marchok that an access request OFDM burst which includes a toneset (which is part of an exclusive assignment) is transmitted from a selected subscriber unit and received by the central access point which sent the exclusive assignment. Accordingly, claim 5 is believed to be allowable over Marchok for at least this reason as well.

Claims 6-8 each depend directly from independent claim 5 and are, therefore, each believed to be allowable over Marchok for at least the reasons set forth above with respect to claim 5. Each of these dependent claims recite additional limitations which, when considered in light of claim 5, are believed to further distinguish the claimed invention over the art of record. By way of example, the Examiner has already indicated that claims 7 and 8 contain allowable subject matter.

Independent claim 18 recites limitations which are similar to those recited in claim 5. Therefore, claim 18 is believed to be allowable over the cited art for at least the reasons set forth above with respect to claim 5.

3. Independent Claims 9, 13 and their dependents

Independent claim 9 recites an apparatus for operating a subscriber unit to request access to a common transmission medium. The apparatus includes a MAC layer processor that receives an exclusive assignment to a toneset within an OFDM burst structure. The Examiner has stated, on page 4 of the Office Action dated October 7, 2004, that it is inherent that a MAC layer processor performs the functions of a receiver. The Applicants respectfully disagree, and note that there is no teaching in Marchok of a MAC layer, or of a MAC layer processor. Further, as previously discussed, Marchok does not appear to teach of any exclusive assignment to a toneset within an OFDM burst structure. Therefore, claim 9 and its dependents are each believed to be allowable over Marchok for at least these reasons.

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Independent claim 13 recites an apparatus for operating a central access point that includes a MAC layer processor that sends an exclusive assignment to a toneset and also assigns at least one time slot to a selected subscriber unit for use of a common transmission medium. It is respectfully submitted that Marchok does not teach of a MAC layer or of a MAC layer processor. In addition, Marchok also does not teach of sending an exclusive assignment to a toneset within an OFDM burst structure, or of a MAC layer processor assigning at least one time slot to a selected subscriber unit. As such, claim 13 and its dependents are believed to be allowable over Marchok for at least these reasons.

Rejections under 35 U.S.C. § 103

Claims 19 and 20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Marchok et al. (U.S. Patent No. 6,122,246), herein and after "Marchok".

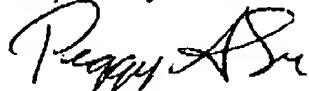
As discussed above, Marchok does not appear to teach of or reasonably suggest an exclusive assignment to a toneset within a burst structure. Hence, claims 19 and 20 are each believed to be allowable over Marchok for at least this reason. Further, since claim 19 includes limitations which are similar to those of claim 1, and claim 20 includes limitations which are similar to those of claim 5, claims 19 and 20 are also believed to be allowable over Marchok for the reasons set forth above with respect to claims 1 and 5, respectively.

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Conclusion

For at least the foregoing reasons, Applicant believes all the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (408) 446-8696.

Respectfully submitted,



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